



## COUNTY OF PLACER

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

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### **West Nile Virus - Frequently Asked Questions**

#### **What Is West Nile Virus (WNV)?**

WNV is a virus - formally called a flavivirus - commonly found in Africa, West Asia, and the Middle East. It is closely related to the St. Louis encephalitis virus found in the United States. Federal Centers for Disease Control and Prevention (CDC) scientists believe that the virus has probably been in the United States since 1999. In 2002, more than 4000 human cases were reported in 44 states, including 284 fatalities. Human illness from West Nile virus is rare, even in areas where the virus has been reported. The disease is transmitted from birds to mosquitoes, and then to humans, but the chance that a person is going to become ill from a mosquito bite is low.

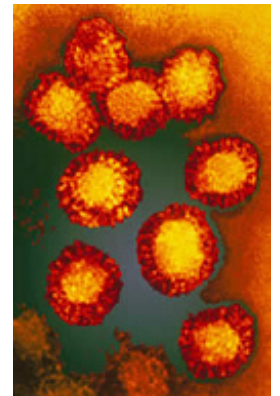


#### **What Is West Nile Fever?**

West Nile fever is a mild illness characterized by flu-like symptoms. West Nile fever typically lasts only a few days and does not appear to cause any long-term health effects.

#### **What Are The More Severe Diseases Caused By WNV?**

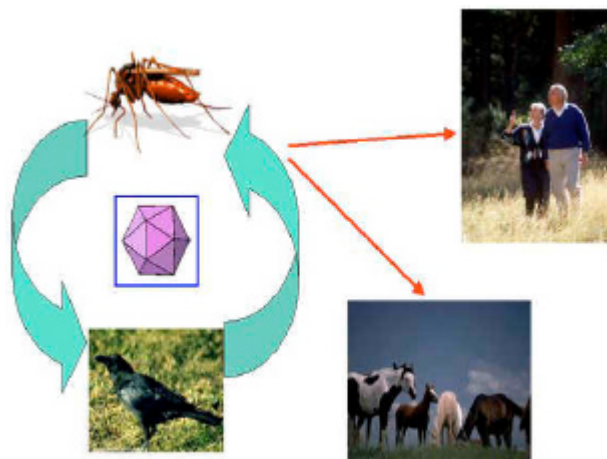
A person can have a more severe disease than West Nile fever after infection with the virus. More severe diseases include "West Nile encephalitis," "West Nile meningitis" or "West Nile meningoencephalitis" (encephalitis refers to an inflammation of the brain; meningitis is an inflammation of the membrane around the brain and the spinal cord; meningoencephalitis refers to inflammation of the brain and the membrane surrounding it). Flaccid paralysis, or paralysis with a severe loss of muscle tone, has also been associated with WNV. Symptoms of severe disease may last a few weeks, although neurological effects can be permanent. It is estimated that 1 in 150 persons infected with WNV will develop a more severe form of disease.



*WNV Virus*

## How Do People Get WNV?

Mosquitoes become infected when they feed on infected birds, which may circulate the virus in their blood for a few days. Then, infected mosquitoes can transmit WNV to humans and animals while biting to take a blood meal. The virus is located in the mosquito's salivary glands. During blood feeding, the virus may be injected into the animal or human, where it may multiply, possibly causing illness. The incubation period in humans is usually about 3 to 14 days. WNV is not transmitted from person-to-person, or from horse-to-person.



## How Can I Keep From Getting WNV?

- ◆ Sparingly apply insect repellent that contains DEET to exposed skin. Follow label directions. A heavy application is not necessary.
- ◆ When outdoors, wear long-sleeved shirts and long pants, if possible. Stay indoors at dawn and dusk, if possible.
- ◆ Place mosquito netting over infant carriers when outdoors.
- ◆ Frequently drain sources of standing water around the yard (once per week). Be sure to clean birdbaths and plant containers.
- ◆ Check and clean rain gutters for standing water and debris.
- ◆ Remove and discard tires and other items that can collect water.
- ◆ Remember that vitamin B and “ultrasonic” devices are not effective against preventing mosquito bites.



## Is DEET Safe?

DEET (chemical name, N,N-diethyl-meta-toluamida) is the active ingredient in many insect repellent products. It is used to repel biting pests such as mosquitoes and ticks. Products containing DEET are available to the public in a variety of lotions, liquids, and sprays. Products to be applied directly to human skin contain from 4% to 100% DEET. DEET applied to the skin is designed to repel insects, not kill them. After extensive testing, the Environmental Protection Agency believes that normal use of DEET does not



present a health concern to the general population. Always follow label directions when using insect repellent products. For more information about DEET, visit the Environmental Protection Agency's Web site, at [www.epa.gov/pesticides/factsheets/chemicals/deet.htm](http://www.epa.gov/pesticides/factsheets/chemicals/deet.htm).

### Home Owner Checklist of Mosquito Sources\*

<b>Fish Pond</b>	Stock with mosquito fish, remove excess vegetation, construct properly.
<b>Swim Pool, Spa</b>	Keep water off cover, chlorinate, or plant fish.
<b>Tree Holes</b>	Fill with sand or mortar, remove limb or tree.
<b>Plastic Pools</b>	Empty or tightly cover when not in use, stock with fish.
<b>Containers</b>	Empty, invert, dispose of, or cover to prevent mosquito entrance, (boats, buckets, flower pots, 55 gal. drums).
<b>Bird Bath</b>	Change water frequently, at least once a week.
<b>Sump</b>	Plant mosquito fish.
<b>Basement &amp; Under House</b>	Drain (dampness permits dry rot and termites to damage structure).
<b>Standing Water</b>	Eliminate by draining, filling depression.
<b>Watering Trough</b>	Stock with fish or change water weekly.
<b>Cooler Drain</b>	Prevent water from standing.
<b>Creek</b>	Clean obstructions to promote flow, remove or fill side potholes, stock with fish, do not dump litter or garden debris.
<b>Gutters &amp; Catch Basins</b>	Do not dispose of litter and garden debris in gutters or basins, do not over water yard.
<b>Storm Drains</b>	Do not dispose of litter and garden debris in storm drains, do not over water yard.
<b>Tires</b>	Dispose of properly or cover so that water doesn't collect inside.

\*Source: Placer County Health and Human Services, Environmental Health. For a list of mosquito fish supplies, contact Environmental Health at 530-745-2300.

### Who Is At Risk For Getting WNV?

Anyone bitten by a mosquito could be at risk of exposure to WNV. Persons over the age of 50 have the highest risk of severe disease. Health care professionals do not yet know if persons with weakened immune systems are at greater risk for WNV disease.

## What Are The Symptoms Of WNV?

Most people who are infected with WNV will not have any type of illness or show any symptoms. It is estimated that 20% of the people who become infected will develop West Nile fever. Mild symptoms include fever, headache, and body aches, occasionally with a skin rash on the trunk of the body, and swollen lymph glands.



The symptoms of severe infection (West Nile encephalitis or meningitis) include headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, and paralysis. It is estimated that 1 in 150 persons infected with WNV will develop a more severe form of disease.

## What Is The Treatment For WNV?

Treatment is largely supportive, to provide relief from disease symptoms. Antibiotic treatment, used for bacterial infections, is **not** effective against WNV.

## Is WNV In Placer County?

WNV has not yet been discovered in Placer County. However, L.A. County had a case of WNV in 2002 and there are concerns that WNV might emerge in other parts of California during the 2003 mosquito season. One sign that may indicate that WNV has come to the area is the sighting of dead crows, ravens, blue jays, hawks, or magpies.

## What Do I Do If I See A Dead Bird?

WNV can cause serious illness and death in some birds. California began to test birds for WNV in 2000. State agencies, private organizations and individuals assist in surveillance. If you find a newly dead bird, particularly a crow, jay, hawk, magpie, or raven, **DO NOT TOUCH THE BIRD. Contact: 877-WNV-BIRD (877-968-2473).**



Crow



Hawk



Magpie



Steller's Jay



Raven

## What Do I Do If I Think My Horse May Have WNV?

Most horses bitten by mosquitoes will not become sick with WNV. A vaccine is available to help prevent WNV illness in horses that also protects against other mosquito-borne diseases. However, if you see that your horse is stumbling, circling, has hind leg weakness, is unable to stand, and/or has muscle tremors, contact your veterinarian.

For further information, visit the U.C. Davis School of Veterinary Medicine Web page on WNV and horses ([http://www.vetmed.ucdavis.edu/ceh/wnv\\_info.html](http://www.vetmed.ucdavis.edu/ceh/wnv_info.html)).



## What Is Placer County Doing About WNV?

### Mosquito Abatement

The Placer Mosquito Abatement District surveys to locate mosquito-breeding sources and solve mosquito problems using physical, biological and chemical means, along with public education. The goal is to control or eliminate existing and potential mosquito breeding sources, and to protect public health and comfort, using the safest, least toxic materials available. Surveillance includes:

- ◆ Investigating natural and manmade sources of water including creeks, ponds, wetlands, and industrial and residential areas.
- ◆ Setting traps, and using other methods to gather information about adult mosquito populations in the area.
- ◆ Using sentinel chicken flocks in the county.

For more information, visit the Placer County Mosquito Abatement District Web Site, at [www.placermosquito.org](http://www.placermosquito.org).

### Public Laboratory System

The Health and Human Services (HHS) Public Health Laboratory provides analyses to protect the public's health by testing for many infectious diseases, including WNV. The lab can help by providing free diagnostic testing on suspected cases of human and equine WNV. Physicians should contact Mark Miller, Director of Communicable Disease Control and Laboratory Services, for specific specimen collection and submission instructions ((530) 889-7210).

### Partnering with Medical Providers

Placer County Health and Human Services – Community Health gives medical providers updated information about communicable diseases and other important health topics through its publication, *Spread the Word*, through the Placer County Health Alert Network, and on the county Web site (<http://www.placer.ca.gov/hhs/>). Community Health also provides direct training for physicians and health care providers and coordinates the communicable disease reporting system.



### **Public Education and Information Services**

The Public Information Office provides current information to the general public about communicable diseases through a variety of sources, including the Placer County Web site, local newspapers, on radio and television, and at public meetings.

The HHS Community Health Division provides prevention training and education for targeted audiences upon request. If you are interested in having a Health Educator speak to your group about WNV, contact Lynnette Goldstein at (530) 889-7667.

### **A Collaborative Approach**

Placer County's Agriculture Commission, Office of Emergency Services, Mosquito Abatement District, Community Health Division, Environmental Health, and Animal Control Divisions are working with state officials, local veterinarians, farmers, and the medical community to provide surveillance, testing, education and mosquito abatement to prepare Placer County and its residents in the event that West Nile virus is found in our region.

### **Where Can I Obtain More Information?**

These Web sites can provide further information.

- ◆ Federal Centers for Disease Control West Nile Virus Web page – [www.cdc.gov/ncidod/dvbid/westnile/index.htm](http://www.cdc.gov/ncidod/dvbid/westnile/index.htm)
- ◆ California State West Nile Virus page – [www.westnile.ca.gov](http://www.westnile.ca.gov)
- ◆ Federal Environmental Protection Agency DEET information page – [www.epa.gov/pesticides/factsheets/chemicals/deet.htm](http://www.epa.gov/pesticides/factsheets/chemicals/deet.htm)
- ◆ Centers for Disease Control "Disease Detectives" Web page for kids – [www.bam.gov/detectives/westnile.htm](http://www.bam.gov/detectives/westnile.htm)